

U.S. Patent Application Serial No. **10/561,542**
Reply to OA dated May 26, 2011

REMARKS

Claims 1 and 7 are amended to more clearly define the claimed invention. The Applicants submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated May 26, 2011.

In the Office Action, the drawings are objected to because in FIG. 2, "14" should be --15--. Attached herewith is a replacement drawing sheet to correct the number. Removal of the objection is respectfully requested.

In the Office Action, the disclosure is objected to and verification is requested as to whether the "=" symbols in the formula " $10,000=b=12,500$ " are correct. Also, a typographical error at the last line on page 7 needs to be corrected.

Regarding the formula, Applicants have amended the Specification to correctly express the mathematical symbol and corrected the typographical error on page 7. Removal of the objection to the disclosure is respectfully requested.

In the Office Action, Claim 7 was objected to because of various informalities listed on pages 3 and 4 of the Office Action. Claims 1 and 7 are amended in a manner which presents the claims in a more clear manner. Removal of the rejection is respectfully requested.

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In the Office Action, Claims 1 and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by Chan et al. (U.S. Patent Publication No. 2003/0084528). Reconsideration and removal of this rejection are respectfully requested in view of the present claim amendments and the following remarks.

In the Office Action, Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. in view of Gleason et al. (U.S. Patent No. 6,496,999). Reconsideration and removal of this rejection are respectfully requested in view of the present claim amendments and the following remarks.

It is respectfully submitted that Chan et al. discloses a toothbrush with a head having a first tufted portion (36) that oscillates about a pin in the center of the first tufted portion and a second tufted portion (38) that reciprocates in the longitudinal direction of the toothbrush. Chan et al. teaches that the combination of the first and second tufted portions, provides excellent cleaning of teeth.

The specification of the present application teaches that the present invention, having a single tufted portion formed in the head, with the single tufted portion having a plurality of tufted filaments, and with the entire tufted portion having a linear movement in only a longitudinal direction of the toothbrush, provides excellent cleaning of teeth. Therefore, Claim 1 has been amended in order to distinguish the present claimed invention over Chan et al.

On page 6 of the Office Action, it is mentioned that Porper et al. (U. S. Patent No. 6,138,310) is pertinent to a reciprocating toothbrush arrangement. It is respectfully submitted that the toothbrush of Porper et al. has two "heads" and moves back and forth in the longitudinal direction of the toothbrush. Therefore, Claim 1 has been amended to recited that the present claimed invention has a single head.

In the Office Action, it is stated:

Given such a teaching by Chan (e.g., the wide range of "2000-11,000), even assuming arguendo that the product of the distance (mm) of movement of the tufted portion and the frequency (time) of back-and-forth motion per minute were not in the range of 5,000-7,000, through known optimization techniques, it would have been obvious to one of ordinary skill in the art to have simple modified the product of the distance (mm) of movement of the tufted portion and the frequency (time) of back-and-forth motion per minute to be in the range of 2,000-7,000 in order to optimally or more effectively remove plaques.

It is further respectfully submitted that it is an object of the present invention to provide an electric toothbrush superior in plaque removal, producible at a low cost, and utilized without damaging gum even by a patient with gingivitis (paragraph [0006] of the US publication). However, Chan et al. fails to describe or suggest such an object. Accordingly, even if Chan et al. overlaps the present invention partially in a point of a product of the distance (mm) of movement of the tufted portion and the frequency (times) of back-and-forth motion per minute, it is impossible for a person

of ordinary skill in the art to optimize it because the object is completely different from the claimed invention. That is, it is not easy to achieve the present invention by reading Chan et al. In addition, if the distance (mm) of movement of the tufted portion of Chan et al. is set within a range of 4 mm to 6 mm, the distance is so large that a gum of a patient with gingivitis may be injured. On the contrary, in the present invention, the product of the distance (mm) of movement of the tufted portion and the frequency (times) of back-and-forth motion per minute is set properly. As a result, it provides an electric toothbrush superior in plaque removal without damaging the gums, even of a patient with gingivitis.

Furthermore, as mentioned above, Chan et al. has two bristle holders, wherein the first bristle holder oscillates about a pin in the center thereof, and the second bristle holder reciprocates in the longitudinal direction of the toothbrush. But the present invention has one tufted portion, which moves in a longitudinal direction of a replaceable brush by back-and-forth linear movement.

Thus, the movement of the brush of Chan et al. is completely different from the movement of the present claimed brush. Accordingly, even if the second bristle holder of Chan et al. moves within the same range as in the present invention, it cannot provide the same action and effect of the present invention.

In view of the amendments to Claims 1 and 7, and the above remarks, removal of these rejections is respectfully requested.

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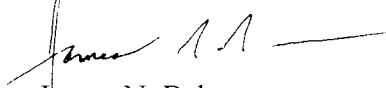
In view of the aforementioned remarks, Claims 1, 7 and 8, as amended, are believed to be patentable and in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicants' undersigned Agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Replacement Drawing Sheet for FIG. 2